

## Improving Public Health through Urban and Roadside Vegetation

**What is this project?** The U.S. Environmental Protection Agency (EPA) is investigating how planting roadside and other urban vegetation may reduce the amount of pollution impacting a community from roadway vehicle emissions, as well as offer other environmental benefits like water runoff control, noise reduction and shade. The EPA will join partner organizations in designing, planting, and monitoring roadside vegetation projects in California and Michigan to identify the effects on local air quality.

**Why is EPA doing this work?** Numerous health studies have found that people living, working, or going to school near large roadways face increased risks for many health problems including asthma and cardiovascular disease. These health concerns, some of which may lead to premature death, have been linked to the elevated air pollution levels often present near high-traffic roadways. Appropriately selected and planted roadside vegetation may reduce these air pollution concentrations by providing a way of reducing exposures to traffic emissions.



**Can roadside vegetation reduce air pollution?** Several studies have shown that pollutant concentrations behind roadside vegetation similar to those shown in the pictures can be lower than concentrations when the vegetation is not present. The vegetation can reduce pollution by forcing air up and over the trees and bushes, as well as trapping certain pollutants on leaves and branches. However, studies have also shown that spaces and gaps between roadside vegetation can lead to increased pollutant concentrations along and away from the road. Therefore, vegetation must be healthy and thick in order to provide an air quality benefit.

**What will this project accomplish?** EPA plans to work with partner agencies, non-governmental organizations, and local community partners in California and Michigan to establish a roadside vegetation barrier at a location(s) of mutual interest. This project will include designing the barrier using the latest research on air quality and other environmental impacts; working with community groups to plant, build, and care for the barrier; and working with partners to monitor environmental benefits before and after the barrier is planted. EPA will also work with partners to develop educational and outreach materials related to public health concerns and mitigation of traffic-related emission impacts. Due to limited funding, one location in California and one location in Michigan will be selected.

**What types of partnerships is EPA seeking?** EPA is very interested in partnering with other organizations on this project. Some examples include local planners, public health officials, city leaders, school districts, urban foresters, transportation departments, and environmental and community improvement organizations.

***Who can I contact if my organization is interested in participating?*** In California, please contact Ken Davidson ([Davidson.Ken@epa.gov](mailto:Davidson.Ken@epa.gov)); in Michigan, please contact Sheila Batka ([Batka.Sheila@epa.gov](mailto:Batka.Sheila@epa.gov)). For general project questions, please contact Rich Baldauf ([Baldauf.Richard@epa.gov](mailto:Baldauf.Richard@epa.gov)).